CHAPTER 6

The training of rural doctors: The case of Walter Sisulu University Medical School

Why did I stick around for twenty years? I think, as a person, it was a very rewarding time... What I realised very early in my work here is that people didn’t have practically anything. So [for] every single person you meet as a doctor, you could do something. And then every day I could go home being happy that I’d made a little bit of difference in somebody’s life. (Dr Parimalarani Yogeswaran, family physician from Sri-Lanka, WSU Medical School)

The town of Mthatha,23 where the medical school at Walter Sisulu University (formerly the University of Transkei or Unitra)24 is situated, is the epicentre of a large rural area in the Eastern Cape, on the road between East London and Durban. It is important to say this, because the location of the medical school in this town is both its raison d’être and the reason for many of its troubles. Mthatha was once the thriving capital of the apartheid state of Transkei. With the advent of democracy, the Transkei became just one region of the much large Eastern Cape province and Bisho, not Mthatha, was made the capital. Since then many of the government buildings have emptied and decayed, industries that once capitalised on the border industry incentives of the old government have withdrawn, leaving many people without work. The largely rural population of about three million people is so poor that it is not uncommon for as many as ten people to live off a single old age or disability pension,25 AIDS is rife (although not as severe as in some other provinces),26 and the exceptionally high suicide rate in the area is thought to be closely linked.27 Residents point to the advent of a Pick ‘n Pay supermarket, a small new hotel and a number of bed and breakfast establishments as signs of an upturn, but to an outsider the town looks poor and neglected, if crowded. Meanwhile the university has had a troubled history.28 Many academics have left and student numbers have dwindled. It remains to be seen whether Unitra’s merger with Border and Eastern Cape Technikons will revitalise the institution. One thing is certain: the university would not have survived had it not been for the fact that it is the major employer in the town and that it also hosts an important medical school, generally regarded as a kind of oasis in an inhospitable environment.

The medical school is also the major support for the health facilities in and around Mthatha: the old Mthatha General Hospital with its new adjacent psychiatric hospital, the new Nelson Mandela Academic Hospital and five community health centres, established in the 1990s with the support of the Kellogg Foundation, to provide primary health care and a

23 Previously called Umtata.
24 The WSU was officially established on 1 July 2005, the product of a merger between Unitra and Border and Eastern Cape Technikons.
25 Interview with family physician, June 2005.
26 According to DoH (2005a), the HIV prevalence rate among antenatal clinic attendance in the Eastern Cape in 2004 was 28 per cent, the fifth highest rate among the eight provinces in the country. This represented an increase of about 6.3 per cent since 2002 when the prevalence rate was 21.7 per cent.
28 Habib (2001) gives a detailed account of governance issues in the 1990s.
platform for the teaching of WSU medical students. Training also takes place at community hospitals and at hospitals in Port Elizabeth and East London and the school is assisted in its postgraduate training by the UCT. The faculty as a whole includes a School of Allied Health Professions, which offers courses in health education and promotion, and a School of Nursing, which offers nursing degrees and diplomas.

As part of the research for this study, I spent a week in Mthatha, visiting the medical school. I had chosen this medical school as the second case study because it was set up with the express purpose of training more rural and black doctors and I felt sure it would help me to understand better the rural/urban divide in the medical profession. Extracts from my field notes provide a sense of the conditions under which the doctors live and work there:

WSU’s Faculty of Health Sciences is situated, mainly, on the third floor of what used to be a library. The building has been constructed around a large central courtyard, in which vast pillars of concrete support an ornate domed ceiling. Grandiose apartheid architecture *par excellence*. The building’s glory has faded, however. It could do with a coat of paint and new carpets and the small classrooms in which most of the classes are held are drab and airless. At the end of the PBL session which I attend on the first day of my visit, I find that both lifts are not working. The one is completely lifeless. The other in a state of distress. Its doors are constantly opening, half-closing, opening again. At the same time the bottom of the lift is struggling to reach floor level. It stops about 10 cm above and then descends about 10 cm below, over and over again, while the doors half close then open, over and over again. The following day I find this lift at peace, the doors open and stuck. It remains like that until towards the end of the week when I find that the doors, like the eyelids of a corpse, have been closed. I realise that for an entire week both lifts have not been working and there have been no signs of repair work.

I wonder how anyone could work for any length of time in such an atmosphere.

The Mthatha General Hospital was once the major hospital in the faculty’s teaching platform in Mthatha, offering a wide range of services from basic outpatient services to surgical procedures. Now it is a Level One hospital in terms of current health legislation, confined to the provision of basic health-care services and some minor surgical procedures. It is a primary health-care facility and receives referrals from clinics, health centres as well as private doctors. It is run by the faculty’s Department of Family Medicine. The principal family physician shows me around quite late one afternoon. I am introduced to several foreign doctors (Bangladeshi, Nepalese and Nigerian) who are

*A seriously ill patient awaits care at Mthatha General Hospital*
so busy attending to outpatients they spend no more than a few minutes speaking to us before excusing themselves to continue their examinations and treatment. I find wards overflowing with patients and several desperately sick people on temporary beds in the emergency room. They are almost certainly AIDS sufferers, I am told, and must wait there until space can be found in the wards. Some might not make it.

I wonder again how anyone could work for any length of time in such an atmosphere.

About 500 m away from the Mthatha General Hospital is the 512-bed Nelson Mandela Academic Hospital which was completed in 2003 at a cost of about R500 million. It has a huge statue of Mandela and a child in the front courtyard and everything that opens and shuts inside. It is a tertiary Level Three hospital, which means it deals with complicated surgical procedures and disease conditions. Although it is widely described as ‘state of the art’ it has not been able to attract more than about one-half of the medical and nursing staff that it needs and as a result it is unable to use many of its facilities. The overall impression is of beautiful emptiness.

I think how nice it would be to work here, but few doctors want to come to Mthatha, I am told, because the town lacks good schools, has no entertainment, the roads are poor, the security dicey, and the provincial and hospital management inefficient. Financial incentives such as rural and scarce skills allowances are not enough to make it worth one’s while.

About 50 km out of Mthatha, on the way to Kokstad, is the Mhlakulo community health centre that was set up in 1996 as part of the UCHPP (WSU Community Partnership Project). It is a modern building in good condition and appears to be well equipped. Its facilities include a small laboratory, an X-ray machine and it’s open 24 hours a day. It is crowded with patients and the nurses seem very busy. It has only one doctor on duty, a Ugandan, and his responsibilities include teaching students on their family medicine rotation. He tells me that the centre sees as many as 600 patients a day and he shows me a chart with monthly figures: January 13 317; February 9 847; March 10 141; April 12 337...

The history of WSU Medical School

The University of Transkei medical school was established in 1985 with Professor Marina Xaba-Mokoena (with the support of the then Transkei homeland leader Kaizer Matanzima) as its driving force. The motivation was that the existing medical schools did not graduate sufficient black doctors and that the doctors produced by the other seven
medical schools were not appropriately trained to serve in rural areas. The school was also required to show that it would be doing something different to the other schools and this was one of the reasons why it opted for a problem-based as well as community-based approach to learning (Mfenyana 2001).

The medical school has grown phenomenally since its inception but further growth has been capped because it does not have the facilities or staff to take in more than about 100 students a year. This is disappointing for the enormous number of applicants: about 15 for every place that is offered (more than UCT which is about 10:1). A major attraction is that it has relatively low entrance requirements and has therefore offered young people from disadvantaged rural backgrounds a chance to study medicine.

Table 3.2 showed WSU medical school enrolments in relation to other medical schools in the country – about 3.8 per cent of total enrolments in 1999 increasing to 5.6 per cent of total enrolments in 2003. Table 3.3 showed that its graduates formed 2.9 per cent of total graduates in 1999, increasing to 4.3 per cent in 2003. Table 6.1 shows that WSU medical school enrolments have grown by about 53 per cent and graduates by 47 per cent in the four-year period 1999–2003.

Table 6.1 Numbers of enrolments and graduates at WSU Medical School, 1999 to 2003 (percentages)

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrolments</th>
<th>Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>310</td>
<td>38</td>
</tr>
<tr>
<td>2000</td>
<td>330</td>
<td>26</td>
</tr>
<tr>
<td>2001</td>
<td>386</td>
<td>43</td>
</tr>
<tr>
<td>2002</td>
<td>422</td>
<td>48</td>
</tr>
<tr>
<td>2003</td>
<td>475</td>
<td>56</td>
</tr>
</tbody>
</table>

Source: DoE HEMIS database (2004)

Table 6.1 also indicates indirectly that WSU is not graduating as many students as it should, given that its graduation rates (numbers of graduates as a percentage of total enrolments) are not high, ranging from 8 to 12 per cent. As we noted in Chapter 3, the graduation rate is a rough measure of throughput in the absence of studies that track the progress of actual cohorts. Although graduation rates are taken into account in the government funding formula for higher education, they are not utilised much in this study because of the many variables which can skew the totals, including fluctuations in intakes and enrolments, dropout trends, length of curriculum and student quality. Nonetheless, seen very loosely, they can be helpful in pointing to or confirming trends that might warrant further investigation. In this regard it is significant that annual graduation rates at WSU averaged 10.9 per cent across the five-year period 1999–2003, in comparison with the 14.4 per cent average for all medical schools. This trend is consistent with the rapid (53 per cent) increase in enrolments at WSU in this period and the high dropout rates reported in Iputo and Kwizera (2005). The trend is not unexpected, considering that WSU has lower admission requirements than other universities.

Race and gender at WSU School of Medicine

While racial transformation is a major issue at UCT (see Chapter 4) and the other historically-advantaged institutions, it takes a different form at WSU, where the majority
of students are African (as has been the case since its inception). If one were to speak of transformation at all here it would be in terms of equalising the racial groupings and boosting the numbers of white and coloured students who are under-represented in terms of national demographics. Tables 6.2 and 6.3 show that in the five-year period 1999 to 2003, about three-quarters of the students were African and less than a quarter were Indian. Coloured and white enrolments were around 2 per cent of the total.

Table 6.2 Enrolments at WSU Medical School by race, numbers and percentages of total, 1999 to 2003

<table>
<thead>
<tr>
<th>Year</th>
<th>African</th>
<th>Coloured</th>
<th>Indian</th>
<th>White</th>
<th>Total*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>1999</td>
<td>230</td>
<td>74.2</td>
<td>3</td>
<td>1.0</td>
<td>72</td>
</tr>
<tr>
<td>2000</td>
<td>256</td>
<td>77.6</td>
<td>1</td>
<td>0.3</td>
<td>69</td>
</tr>
<tr>
<td>2001</td>
<td>287</td>
<td>74.3</td>
<td>3</td>
<td>0.8</td>
<td>69</td>
</tr>
<tr>
<td>2002</td>
<td>325</td>
<td>77.0</td>
<td>7</td>
<td>1.7</td>
<td>88</td>
</tr>
<tr>
<td>2003</td>
<td>358</td>
<td>75.4</td>
<td>11</td>
<td>2.3</td>
<td>105</td>
</tr>
</tbody>
</table>

* Percentage totals may not add up to 100% because of the effects of rounding off

While enrolments at WSU have shown relatively steady increases from year to year, figures for graduates are less consistent. For example, in 2000 all the graduates were African, while in 2002 only 56 per cent were African. Further qualitative research, which is beyond the scope of this study, is needed to interpret these figures.

Table 6.3 Graduates at WSU by race, numbers and percentages of total, 1999 to 2003

<table>
<thead>
<tr>
<th>Year</th>
<th>African</th>
<th>Coloured</th>
<th>Indian</th>
<th>White</th>
<th>Total*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>1999</td>
<td>33</td>
<td>84.2</td>
<td>2</td>
<td>5.3</td>
<td>4</td>
</tr>
<tr>
<td>2000</td>
<td>26</td>
<td>100</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>2001</td>
<td>33</td>
<td>76.7</td>
<td>0</td>
<td>0.0</td>
<td>9</td>
</tr>
<tr>
<td>2002</td>
<td>27</td>
<td>56.2</td>
<td>1</td>
<td>2.1</td>
<td>18</td>
</tr>
<tr>
<td>2003</td>
<td>37</td>
<td>66.1</td>
<td>2</td>
<td>3.6</td>
<td>17</td>
</tr>
</tbody>
</table>

* Percentage totals may not add up to 100% because of the effects of rounding off

The figures in Table 6.3 show that WSU produced 211 medical graduates in the five-year period. The DoE has not kept figures going back to WSU’s inception, but the Faculty Handbook for 2005 suggests that by about 2002, the Medical School had graduated 118 doctors on the traditional medical curriculum and 161 doctors on the PBL curriculum, making a total of 279 graduates.29 If one considers the DoE figures above, which show

29 The section on the history of the faculty, which quotes these figures, is outdated and appears to have been written about 2002.
that 155 students graduated between 1999 and 2005, then it can be assumed that about 124 students graduated prior to 1999. If one considers the 2003 figures, then the total number of graduates between inception and 2003 should have been about 335.

**Gender at WSU School of Medicine**

Enrolments at WSU are not as markedly feminised as at UCT but nonetheless there are considerably more female students than male, as Tables 6.4 and 6.5 show.

*Table 6.4 Headcount enrolments at WSU by gender, numbers and percentages of total, 1999 to 2003*

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>% of total</th>
<th>Female</th>
<th>% of total</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>144</td>
<td>46.5</td>
<td>166</td>
<td>53.5</td>
<td>310</td>
<td>100</td>
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<tr>
<td>2000</td>
<td>151</td>
<td>45.8</td>
<td>179</td>
<td>54.2</td>
<td>330</td>
<td>100</td>
</tr>
<tr>
<td>2001</td>
<td>183</td>
<td>47.4</td>
<td>203</td>
<td>52.6</td>
<td>386</td>
<td>100</td>
</tr>
<tr>
<td>2002</td>
<td>190</td>
<td>45.0</td>
<td>232</td>
<td>55.0</td>
<td>422</td>
<td>100</td>
</tr>
<tr>
<td>2003</td>
<td>229</td>
<td>48.2</td>
<td>246</td>
<td>51.8</td>
<td>475</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>897</td>
<td>46.7</td>
<td>1 026</td>
<td>53.3</td>
<td>1 923</td>
<td>100</td>
</tr>
</tbody>
</table>

*Source: DoE HEMIS database (2004)*

*Table 6.5 Graduates at WSU by gender, numbers and percentages of total, 1999 to 2003*

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>% of total</th>
<th>Female</th>
<th>% of total</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>17</td>
<td>44.7</td>
<td>21</td>
<td>55.3</td>
<td>38</td>
<td>100</td>
</tr>
<tr>
<td>2000</td>
<td>13</td>
<td>50.0</td>
<td>13</td>
<td>50.0</td>
<td>26</td>
<td>100</td>
</tr>
<tr>
<td>2001</td>
<td>20</td>
<td>46.5</td>
<td>23</td>
<td>53.5</td>
<td>43</td>
<td>100</td>
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<tr>
<td>2002</td>
<td>22</td>
<td>45.8</td>
<td>26</td>
<td>54.2</td>
<td>48</td>
<td>100</td>
</tr>
<tr>
<td>2003</td>
<td>29</td>
<td>51.8</td>
<td>27</td>
<td>48.2</td>
<td>56</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
<td>47.9</td>
<td>110</td>
<td>52.1</td>
<td>211</td>
<td>100</td>
</tr>
</tbody>
</table>

*Source: DoE HEMIS database (2004)*

Tables 6.4 and 6.5 show that females formed 53.3 per cent of total enrolments over the five year period 1999 to 2003, and 52.1 per cent of graduates. There was a difference of approximately 7 percentage points between male and female total enrolments and approximately 4 percentage points between male and female total graduates.

**Staff at WSU School of Medicine**

While matriculants compete to get into WSU Medical School, the same cannot be said for staff, at least not for South African staff. The school and its associated health institutions
struggle to find local doctors who are prepared to work in Mthatha and so they are
staffed almost entirely by foreigners.

I was told of only two South Africans on the Mthatha staff at the time of my visit. Neither
was there at the time. One was the dean, Professor Lizo Mazwai, who is often absent
owing to his membership of many national and international committees (for example, he
is president of the Colleges of Medicine). The other was Professor Khaya Mfenyana of the
Department of Family Medicine, who had been seconded to be deputy vice-chancellor of
the university. Other South African staff are based at the East London and Port Elizabeth
complexes which form part of the teaching platform.

The rest of the staff in Mthatha are from Cuba, India, Sri-Lanka, Nigeria, Uganda and
Eastern Europe, with the Cubans forming the biggest contingent.

The Cuban doctors

The ‘importation’ of doctors from Cuba is one of the strategies employed by the DoH to
increase the staffing of health services in rural areas. With 65 000 doctors for a population of
around 11 million, Cuba has the highest doctor-to-population rate in the world (about 59 to
10 000 compared with our 6.7) and has sent thousands of doctors and other professionals to
more than 40 countries around the world to assist in their health-care programmes.

According to Professor JA Aguirre, head of the Cuban medical doctors at WSU, the first
group of 92 Cuban doctors arrived in February 1996, at the request of President Nelson
Mandela, who brokered the government-to-government agreement for South Africa. A
further request by President Mandela led to the arrival of 11 Cuban medical academics
in February 1997, with Professor Aguirre as their leader. In the years that followed, the
number of doctors on the government-to-government programme swelled at one point
to over 400 and the number of medical lecturers to about 35, but numbers are now
dwindling. At the time of my interview (June 2005), there were only 168 doctors and
26 lecturers on the programme. When I asked Professor Aguirre why, he explained that
some of the doctors had decided to return to Cuba. Furthermore, the Cuban government
had begun supporting countries which it perceived as having a greater need than South
Africa, particularly countries in South America but also other countries in Africa, including
Lesotho, Zimbabwe, Namibia, Botswana, Mali and Nigeria. There are currently around
20 000 doctors, including about 14 000 physicians, in Venezuela alone

However, if numerous media reports are anything to go by, it is likely that the Cuban
government is displeased by the number of Cuban doctors who have opted out of the
programme to stay in South Africa, some after marrying local women, and feels that
Cuba’s interests are better served by sending doctors elsewhere.

Doctors who come to South Africa as part of this agreement have gone through a
strict selection process, first by the Cuban Department of Health and then by expert
representatives of the HPCSA. As part of the deal, they get immediate registration with
the HPCSA without having to go through the usual examination procedures for foreign
doctors, and an immediate work permit. They are paid the same rates as local doctors,
while their normal salary continues to be paid into their personal accounts in Cuba.
Although they have to send a large portion of their South African salaries back to Cuba
(30 per cent to the Cuban government and 27 per cent to a personal account), they still
find it financially advantageous to work in this country as doctors in Cuba are paid very
low salaries (OECD 2004a). A condition of employment is that they will vacate their post
if a South African happens to apply for it. If they decide to stay in South Africa, they have to quit the programme, return to Cuba and apply from there to work here, following the rules that apply to all other foreign doctors.

Cuba has also assisted South Africa by offering 60 scholarships a year to South Africans to study medicine in Cuba, Prof Aguirre said, and there are currently about 300 medical students who are being trained or were trained in this way. They study one year of Spanish and then five years of medicine before returning to South Africa to do their final clinical rotations and community service. They are required to remain in the public service for five years after completion of their studies and they are deployed by their respective provinces to hospitals where their services are needed most. The first 17 of these doctors graduated in a national graduation ceremony held at the Nelson Mandela School of Medicine in Durban in July 2005.

Other foreign doctors

The Cubans at WSU to whom I spoke expressed concern that there are so few South Africans to replace them when they retire or return to Cuba (and many of them are reaching retirement age). Currently, they say, there are so many opportunities for local doctors elsewhere in the country, even within the public service, that it is not surprising they do not want to come to Mthatha. At the same time, the government makes it difficult for foreign doctors to work here unless they come on a government-to-government agreement.

This was confirmed by a doctor from India who was working as a principal medical officer at the academic hospital in Mthatha with surgery as his specialisation. He was trained in India but came to South Africa in 2001 to do his surgical training at Wits and Baragwanath Hospital. He came as a supernumary registrar, which means he worked for the government but did not get paid. In fact, he paid tuition fees. What he gained was his training. He worked in this position for two years in Gauteng and then did his membership examination.

He moved to Mthatha in August 2004 because he knew he would gain a lot of experience in the town – cases that one saw in Mthatha were very different to those in Johannesburg and the exposure made one ‘a very confident surgeon’ who could work ‘anywhere’. Another reason was that his in-laws were in Mthatha, having migrated from India 20 years before.

This doctor said that HPCSA rules stipulate that he had to be in general public service for five years before he could write the registration examinations:

The four years that I spent as a registrar, just like any other registrar, the only difference [was] that I was not remunerated, that does not count as public service. Now I have to wait another five years, write the sixth-year exams of the students I teach and then the registration exam. Five years from now I’ll be 38 and I’ll have to redo the sixth-year exam! It is humiliating for a doctor.

He said that by 2006, he would have been working in South Africa for five years. He was going to write to the council and request the opportunity to write the examinations at this stage. He could not understand the council’s policy because although the hospital had good infrastructure, there was a great scarcity of trained personnel:

When it comes to technical things we have everything, but when it comes to trained people we are short at every level, starting from nurses, porters...
For a foreign doctor this country is really disappointing. The council or the government don’t want you to come into the system although there is a shortage of doctors. SA is not treating foreign doctors with the dignity they deserve.

A Nigerian doctor who first came to South Africa as a consultant for the World Health Organization (WHO), and who has been a visiting professor in the Department of General Surgery at WSU since 1997, described the medical profession in South Africa as ‘a closed shop’:

The licensing procedure…is too cumbersome for a foreigner who wants to come and train here and it’s becoming more difficult as well. I think there should be a change in policies to open up…opportunities to train here, because the beauty about medicine is that when you are training you are also giving service.

He said foreign doctors who trained here could be required to ‘put something back’ by staying on and working in the country after completing their training. They could also be required to sign an agreement that they would work only in the public service.

One foreign doctor said he thought South Africa should make it easier for foreigners to come and work here until it had trained enough of its own local people, at which point it could tighten regulations again. Another pointed out that the KZN medical school had been started by Scottish doctors who later withdrew when enough South Africans were in a position to take over their roles.

In contrast to these arguments, however, a South Africa doctor – the only one I met during my visit – said that ‘at the end of the day’, the foreign doctors who trained here left the country after they had completed their training. He said he knew many foreign doctors who had done this. Furthermore, they had not returned to their own countries, but had gone to Canada, Australia ‘and all those other places’.

The frustrations of working in Mthatha

In my interviews with doctors at WSU Medical School and in the associated teaching hospitals, I was told repeatedly of the frustrations of working there. First, there was the general shortage of medical and nursing staff which increased their work loads. Secondly, there was the inefficiency of management and the provincial DOH. Thirdly, there was the attitude of nurses. Finally, there were the poor conditions in the town and on campus.

**HIV/AIDS**

Although the rate of HIV/AIDS infection in the Eastern Cape is by no means the highest in the country, the disease is said to have changed, quite drastically, the nature of work in the health system in and around Mthatha. Dr Parimalaranie Yogeswaran, principal family physician and domain manager at Umtata Hospital Complex and senior lecturer at WSU, said she thought HIV/AIDS had changed the whole health system ‘totally’. When she was a junior medical officer working in casualty at Mthatha General Hospital she would see a maximum of two patients a day with a chronic problem and people did not die in casualty unless they had come in with a gunshot wound or had a heart attack or something similar. Chronic patients hardly ever died in casualty, but now there were always several stretchers with terminally-ill chronic patients with HIV-related opportunistic infections, who could not be admitted to wards because there were not enough beds. Many died there and then, in the casualty ward. Doctors felt helpless they could do so little and had asked not to have to do casualty work for more than a day at a time because it was so emotionally draining.
**Shortages of staff**

Despite the contributions of foreign doctors, the health facilities remain understaffed, particularly those at the new Nelson Mandela Academic Hospital. The head of surgery told me his department had only 40 per cent of the specialists, 50 per cent of medical officers, 30 per cent of surgical nursing staff and 50 per cent of the nurses that it needs. Furthermore it could use only six of the 12 intensive-care beds because of understaffing.

The problem of staff shortages applies throughout the hospital where, according to Dr Lungelwa Linda-Mafanya, head of clinical governance at Nelson Mandela Academic Hospital, there are only half the number of nurses and 58 per cent of the number of doctors that are needed. Until recently there were even fewer nurses (43 per cent). Their numbers have since increased to 50 per cent because the hospital appealed to retired nurses to come back to work.

The head of surgery said that the surgery department was ‘terribly busy’ at the Nelson Mandela Academic Hospital and while the Department of Surgery at UCT probably had ten times the number of staff they did, the work load was almost as great. At night, there would often be only one medical officer on call when there should have been three or four. As a result, that doctor would be operating all night without a break and emergency operations that he or she was unable to do would have to be done the following day, causing long delays in elective surgery. He said the overload caused the doctors a great deal of stress and they lost concentration.

More cynically, some doctors spoke of the tremendous opportunities to gain clinical experience in such an environment. One doctor said community service doctors loved coming to the academic hospital because they were likely to learn more surgical skills there than anywhere else. They did not have to compete with the professor and many other students for an opportunity to perform or assist directly in an operation. In one night at the academic hospital there could be about 15 Caesarean sections, for example.

**Salary and other administrative issues**

Foreign and local doctors alike presented a number of concerns about management and the provincial administration, including:

- Not being paid any salary at all for months;
- Not being paid overtime pay or salary increases that were due;
- Delayed responses to job applications, which led to the applicants finding work elsewhere;
- Broken promises about conditions of service; and
- Inordinately long delays in the provision of equipment.

All these problems, they said, were in addition to those associated with working in an environment that was grossly understaffed.

A Ugandan doctor said he had been working for three months before he received his first cheques – ‘and I was told I was lucky. Other people only get their first salary after six months’. There were times when overtime went unpaid for almost two years and one intern had still not received any salary by the end of his internship. How could one retain an intern in those circumstances? Grievances, even small ones, took ages to sort out.

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30 This doctor also said Afrikaans-speaking students were more at home there than English students and the local students found it easier to interact with Afrikaans students than with English students. Students from Stellenbosch ‘love this place’, he said.
because of the amount of paper work required by the bureaucracy and the attitude and poor work ethic of the officials.

The South African doctor told me that before coming to the academic hospital he applied for a specialist consultant’s post and thought he had got it, but when he arrived at the hospital he found he had been appointed a medical officer at a much lower salary: ‘That was the strategy of the management here. I am still employed as a medical officer although I do the work of a consultant.’ This doctor completed his postgraduate training at the UKZN in 2002 and came to WSU in 2003. A qualified surgeon, he also has teaching responsibilities: he teaches on the ward rounds and also in the ‘expert resource sessions’, which are similar to lectures, once or twice a week. He said he received no recognition from the university and was not sure if they even knew of his existence. He said he thought local people would be more attracted to the hospital if the university could recognise the part they played and possibly give them appropriate titles.

The doctor also complained that the hospital did not provide Internet facilities for its staff, only for its managers. He had to search the Internet on his own computer at home and pay for his subscription to a surgical journal out of his own pocket – over R3 000 a year. He was staying in a one-bedroom flat while his wife and children were at Indwe, 200 km away. The (hospital and university) management made no effort to recruit staff or make it comfortable for them when they arrived. People who were interested in working there or had come to work there, often left once they found out how management treated its staff. Interns also left for other areas because they did not receive appropriate recognition, had difficulty finding accommodation and could work for months without a salary.

The South African doctor said that when he was about to leave to take up a position in Durban, he was offered the position of principal specialist at the academic hospital, but after he had turned down the Durban offer to take up this post, the academic hospital ‘decided not to give me the post’. He said he very much regretted that he had once again been naive enough to trust a verbal offer. Asked about his plans, he said he did not think he would still be there by the end of the year.

Professor Orlando Alonso Betancourt, professor of psychiatry, spoke of the inordinately long delays in getting equipment for the new psychiatric wing of Mthatha General Hospital:

The unit was finished in November 2004. Eight months later we still don’t have the furniture we need. The first phone was installed last week…

He said there was a desperate shortage of psychiatrists in the Eastern Cape. There were only 20 in total and ten of these were in private practice. Most were in Port Elizabeth or East London, but the department was not providing sufficient financial incentives to attract psychiatrists to the region, nor was it effective when recruiting doctors.

I have lost about four South African doctors who wanted to come here; they came, they submitted their papers and nobody called them for an interview and after six months they [the provincial administration] called them and then they say, ‘No. How [do you think] I’m going to wait for six months to be called? I thought you didn’t want me and I’m working somewhere else.’

Problems with nurses
Several doctors reported that they were unhappy with the attitude of nurses.
A Ugandan family physician whom I met at the community health centre, said it was very frustrating to work in Mthatha, not only because they were short of supplies but also because he had ‘a big problem with the nurses’:

Either they are poorly-trained or their work ethic has gone down. Because you are tending to a patient, you call a nurse to help you and it’s like they are doing you a favour. I’m not used to that. I am used to willingness.

He said at Medunsa (now University of Limpopo) where he worked previously, doctors and nurses worked as a team and nurses often offered to help before they were asked. At the private hospital in Mthatha it was also different. A colleague in private practice would sometimes ask the hospital to call him if he was out of town. When the nurses called him, they immediately gave him a brief history of the patient. When he got to the hospital, they would have already taken blood samples, taken the patient’s temperature and blood pressure, checked the blood sugar and put up a drip if necessary. At the community health centre where he worked, he could not rely on the nurses to take the blood pressure of a patient with hypertension.

Dr Linda-Mafanya said that in the past nurses worshipped the doctors as ‘gods’:

but with the…introduction of the democracy, I think things have changed a bit, because now the society that we are dealing with is democratised, and people are aware of their rights and responsibility. As a result of that now, there has been, I would say, a mindset shift from the nurses’ side, probably from the doctors as well, in the sense that now they are in a position to speak out and not to be too submissive to the doctors.

Dr Linda-Mafanya said nurses were now refusing to perform some of the functions which they did in the past. For example, in the past they used to take blood for the doctors:

but with democracy and the new government, and all that, nurses, they are refusing to take bloods altogether – they say doctors are supposed to be doing it on their own. There are many other issues [where they say] upfront that ‘this is not in my scope of practice as a nurse, the doctors are supposed to do it.’

But in the past, I mean, they used to do everything, almost everything…

Another example provided was that of putting up drips – in the past doctors would ask nurses to do this, and they would only do it themselves if the nurse was unable to do so, perhaps because the veins of the patient were not visible. Nowadays they had to think twice before asking a nurse to put up a drip at all.

A Nigerian doctor who had worked in other African countries was not concerned about the functions which Dr Linda-Mafanya mentioned because she said she was used to doctors putting up drips (in Zimbabwe they would even call them out at night to do so) and the usual blood tests were done by laboratory staff. However, she was concerned that nursing staff failed to perform other routine functions. She said she was used to having nurses checking vital signs (blood pressure, temperature etc.) before she had to deal with the patient, but this was not the case in Mthatha.

It is a limitation of this research that I did not interview nurses in Mthatha, because of time pressures. However, I did gain alternative views from other doctors I interviewed.
and I also consulted nurses in Cape Town on my return. Furthermore, the HSRC is planning to conduct a research study on the nursing profession, similar to this study of the medical profession.

**The town of Mthatha**

Doctors were asked in interviews to suggest ways to encourage other doctors to come and work in the area. A common response was: ‘do something about the town’. Doctors complained of a lack of good schools, entertainment (there was no cinema, for example) and sporting facilities. The security situation varied, they said, with periods of anxiety and periods of relative calm. However, there had been incidents such as the recent shooting of an elderly white woman on the road to Port St Johns, which had been widely publicised and was very bad for the image of the area.

Students, whom I interviewed in a focus group, complained that conditions in the residences were ‘rough’ (for example, only cold water in the showers at times, and nights with no electricity). There was only one sports field on which all the sports from soccer to netball had to be played and it was unsafe to walk on the campus at night, particularly for female students.

**The threat (and opportunities) of private practice**

While working as a doctor in Mthatha has its disadvantages, the town is also providing growing opportunities for private practice. More of the inhabitants have medical insurance and are using it to escape the long queues and sometimes poor services that they find in the public sector. There is a thriving private hospital. Doctors in the public service are allowed to operate privately in their spare time in terms of a government policy known as RWOPS (Remunerative Work Outside Public Service), which was designed to make it more attractive for doctors to stay and work in the rural public service.

Unfortunately, private practice is also one of the greatest threats to the functioning of the public health services in Mthatha and the more public service doctors participate in it, the worse the public health services are likely to become. The RWOPS policy is problematic in that the public service usually relies on its staff for overtime work, which is remunerated, but now public service doctors are less willing to do such work and some find private practice so attractive they leave the public service altogether – even though they stay in the area. One doctor said there was abuse of the system but that there was little that could be done about it. The DoH could not afford to ‘throw down the book’ because then the doctor would say: ‘Okay, fine, let me go into private practice fulltime and then you’ll have nobody to replace him.’

The problem is exacerbated by the perception that nurses in the private hospital are better disposed towards doctors and more helpful than those in the public facilities (see the comments of the Ugandan doctor in the previous section).

**A curriculum solution for the training of rural doctors?**

WSU Medical School is known internationally for its innovative problem- and community-based curriculum, which it introduced in 1989, when the PBL approach was only...
beginning to gain popularity in the USA and long before the trend ‘caught on’ in South Africa. It was seen as a good way to train doctors who would be able and willing to work in poor, rural conditions. The obvious question is whether it has managed to produce such doctors and whether they are willing to stay on in the area, but first it is important to consider the background to the introduction of PBL at WSU.

The history of PBL/CBE at WSU Medical School

In a guest editorial in the Unitra Community Health Partnership Project (UCHPP) publication, Professor Dan Ncayiyana, who was once Acting Dean of the WSU Faculty of Health Sciences and at the time of writing editor of the *SA Medical Journal* and Vice Chancellor of ML Sultan Technikon, spoke of the early days of WSU medical school and its decision to adopt a problem- and community-based method of education (PBL/CBE).

Professor Ncayiyana recalled that when Professor Xaba-Mokoena committed the faculty, in her inaugural address, to problem- and community-based education,

neither she nor any one of us listening to her and enthusiastically applauding her oration had the faintest idea of the revolutionary implications of such a commitment, nor of the extent to which the new, problem- and community-based approach would wrench the WSU model from the traditional mould of mainstream medical schools in South Africa. For a new medical school with no creditworthy academic track record, such a route was full of risks and WSU would need both courage and resolve to embark on its new vision. In the event, the logic for curricular innovation was too overwhelming to ignore and in 1989, WSU became the first South African medical school to implement a curriculum based on problem- and community-based learning (PCBL) principles. (Ncayiyana 2001: vii)

Interestingly, it was the ‘problem-based arm’ of the programme that proved to be relatively easier to implement than the ‘community-based arm’, Professor Ncayiyana said, mainly because of Transkei’s particular problems of dire poverty and a poorly-developed infrastructure in terms of electricity, roads and telecommunications.

Nearly a decade later, I found the community-based training was still affected by these same problems. Students told me of visiting clinics that had no electricity or running water. Dr Yogeswaran told me of an excellent programme which collapsed when the vehicle broke down and was not fixed:

I was in charge of one of the rural health centres for some time. We made a new programme whereby a team of us – a doctor, nurse, TB field worker, a matron and a social worker – went to different clinics once a week. Every clinic we repeated once a month, so patients with chronic illnesses no longer had to travel far to get their medication. We would collect their drugs from the dispensary and take them to the patients. And on the day that we would visit a clinic, there would be 50, 60 people waiting for us. It was so easy for them, they didn't have to spend money. They could bring their family with them. We ran that for over two years. And then the van was involved in an accident and was a write-off and then the whole thing stopped. And that was the end of it.

Nevertheless, Professor Ncayiyana noted that three developments helped WSU put in place what was eventually to become a ‘truly exemplary community-based programme’. The first was the creation of the Department of Family Medicine. The second was the appointment
of Khaya Mfenyana, ‘poached from Medunsa’, as full professor of Family Medicine. The third was the successful soliciting of major funding for the UCHPP project from the Kellogg Foundation. This funding enabled the building of five busy community-based primary health-care centres in the 1990s. These are strategically-situated in needy areas on the major routes to Mthatha, reasonably close to WSU and on good roads so that students can be taken there and back in one day. Ncayiyana says the UCHPP was ‘a true partnership between town, gown and crown (rural traditional leaders and their communities) in which all the partners have an equal voice in the delivery of health-related services and are equal lobbyists vis-à-vis government for those services’ (Ncayiyana 2001: ix).

**Problem-based learning at WSU Medical School**

Problem-based learning has given the medical school international exposure through its many publications on the topic including Mammen 1996; Iputo and Nganwa-Bagumah (1996); Buga (1998); Iputo (1999); Kwizera et al. (2001); Dambisya (2001, 2003); Meel 2002.32

Iputo and Nganwa-Bagumah (1996) have described the basic approach. At the core of student activity, they say, are the PBL sessions. At that time, each group consisted of six to eight students and two members of the lecturing staff (one clinician and one basic scientist) who acted as tutors. Each group met for ten weeks, after which the students were reshuffled into new groups and two new tutors arrived. The main activity was to receive and analyse clinical scenarios together with the goal of learning the basic material connected with each disease or patient problem. In the first three years, the emphasis was not on correct diagnosis and treatment, but on the identification of the structural and functional issues associated with each case, thereby providing a context for students to learn basic science material. In the latter years the emphasis shifted to diagnosis and management of disease.

Iputo and Nganwa-Bagumah noted that in the early years students needed a lot of support and encouragement from the faculty with regard to the clinical reasoning process and the identification of appropriate learning resources. ‘They also have to overcome lingering doubts as to whether they are learning appropriate information. But with time, and by focusing on specific issues encountered in each case, the students discover that by the end of three years, they have covered all the body systems’ (1996: 650). They insist that tutors should act as ‘facilitators’ rather than ‘resource experts’ and that ‘they are actively discouraged from answering questions of substance’ (1996: 650).

Over the years, as WSU’s student numbers have grown, the PBL groups have also grown bigger, to around ten students each, and the number of tutors has shrunk from two to one. Tutors are also not necessarily experts in the topic at hand. A study of the third-year programme by Kwizera et al. (2001) has investigated whether student achievement is affected if the tutors are not experts in the subjects under discussion. In third year, they say, the focus of the curriculum is on pathology, microbiology and pharmacology but it is not possible to have an expert in each of those subjects in every tutorial group as, with the staff complement available, the groups would become too large. They conclude that tutors’ expertise, or lack of it, does not influence student achievement. However, it should be noted that the ‘non-expert’ in their study was nonetheless a qualified scientist. This is not necessarily the case in PBL curricula elsewhere in the country and the world, where tutors are often from non-scientific fields.

32 The faculty has also contributed to literature on community-based education with articles such as Mazwai (1997).
Evaluation of the curriculum

A number of WSU staff have attempted to evaluate the PBL curriculum. Mammen (1996) conducted a survey of staff and student perceptions of the PBL curriculum and found it was perceived to be superior to the traditional curriculum by both staff and students who were engaged with the PBL curriculum. However, 57 per cent of the staff and 87 per cent of students in the sample felt that PBL provided less theoretical knowledge.

Iputo (1999) conducted a longitudinal cohort study of the impact of PBL on the learning styles and strategies of medical students at WSU. One hundred and forty students (75 per cent African and 25 per cent Indian) were interviewed and followed up over the first four years of their training, using the Lancaster Inventory of Learning Styles. He concluded that the PBL curriculum had a positive effect on the learning styles of the students, especially the African students. They became more versatile learners with a leaning towards an ‘operation’ learning style which involves ‘a step-by-step local approach to learning’ and ‘emphasis on factual details’. There was less competitiveness, less superficial behaviour (such as jumping to premature conclusions and making generalisations without evidence), and greater understanding of how the various elements of a topic interrelated and how the topic fitted into the subject area in general. However, the students still remained syllabus-bound.

More recently, Iputo and Kwizera (2005) published the results of research designed to compare the academic performance of students on the previous, classical, discipline- and lecture-based traditional curriculum with that of subsequent students who followed an innovative, problem- and community-based curriculum. The study involved retrospective analysis of the records of students who enrolled between 1985 and 1995 and students who graduated between 1989 and 2002. The study assessed attrition and graduation rates of students on the traditional curriculum and those on the innovative curriculum.

A total of 149 students on the traditional curriculum and 145 students on the innovative curriculum were studied. Overall, 23 per cent of the traditional cohort, as opposed to 10.3 per cent of the innovative cohort, dropped out of the course and 55 per cent of the traditional cohort, as opposed to 67 per cent of the innovative cohort, graduated within the minimum period of six years. The mean throughput period was 6.71 years in the traditional cohort and 6.44 years in the innovative cohort. The authors concluded that the introduction of the PBL/CBE curriculum coincided with improved academic performance and that the PBL/CBE approach might have contributed to this improvement.

Staff and students’ opinions

The staff pride themselves that the problem-based approach is an ideal way to nurture rural students. They said in interviews that in the small PBL groups, these students gained the confidence to ask questions and present their work. The fact that English was not the first language of many of the tutors meant they were not shy to make mistakes. They were also encouraged to ask fellow students to explain in Xhosa if necessary. Staff also find this kind of teaching personally rewarding.

This kind of [teaching] is very rewarding. You know your students like your children. You talk to them, you interact with them, you help them with their ball at the end of the year…And later you get calls from them, ‘Prof…I’m far away now in Natal in this little rural area and I don’t remember the name of this medication…’ This kind of interaction is very rewarding. (Professor Alonso Betancourt)
Several lecturers told me how much they enjoyed PBL sessions and admitted to learning from their students:

The people who learn the most are the tutors, from the students… learn from the students from many issues. You start learning from the students not only in the way they communicate, and all that, which is feel for learning from all those human beings. But technically you learn from them because they’re coming to you talking about microbiology, physiology, anatomy, embryology, internal medicine – and by listening during four hours twice a week during a whole year, can you imagine the integration that me and you are able to get – just by listening [to] all the people talking. (Professor Aguirre)

In a focus group discussion with 19 senior students, held at the Nelson Mandela Academic Hospital, students indicated to me that they enjoyed PBL sessions, but also expressed some reservations. They felt it taught them to acquire information from many different sources and was good preparation for further training. However, several agreed that they were not getting enough tuition on the theory work. ‘The clinical skills you get. The theory you do on your own.’ Others said there was ‘not much teaching’, that they felt ‘self-taught’ and sometimes wished the lecturers would ‘do more’. Finding the information for oneself was very time-consuming and ‘the problem is there are only 24 hours in a day’.

**Observations of PBL sessions**
As part of my research at WSU, I sat in on three PBL sessions. Two were with the same group of third-year students. One was a report-back by group leaders to the tutors. I also spent a short time in another group of second-year students.

The third-year group were dealing with a case concerning a child with an acute respiratory infection. Over the course of two three-hour sessions, the students were presented with five typed sheets of paper, each containing some details about the case. For example, the first started:

Asanda Koyo, a 5-year-old girl who was well until two days ago, is brought to hospital complaining of difficulty in breathing...

The information included the child’s medical and immunisation history and some details of her family’s medical history, information about the findings on examination, details of the tests conducted and their results, and information about her treatment. Students were required to develop hypotheses and identify learning issues. As they acquired more information, they revised their hypotheses and learning issues. In between sessions, students were required to prepare a presentation based on the learning issues. At the end of the sessions, the facilitator (a microbiologist) showed me the set of objectives underlying these particular PBL sessions. It was expected that, after completion of the case, students would be able to understand the anatomy, histology and physiology of respiratory organs, discuss selected pathology of the respiratory tract, discuss preventive measures, medicines, allergic conditions and so on. They also discussed psycho-social aspects, although this was not a specific objective of this case.

My overall impression was that the method does, indeed, encourage students to be more outspoken and confident, although there is the risk that one or two might dominate the proceedings. The PBL sessions were also enjoyable. However, at the end of my observations I came to share some of the epistemological concerns about PBL which have been expressed in the international literature. Is it the most effective way to teach the basic sciences? And do the students acquire enough ‘content’? I am aware that
some PBL enthusiasts believe that medical students do not require the extensive basic science knowledge which they were taught in the past, although in this context this was apparently not the case, judging from the stated aims of the exercise. My research was not extensive enough to provide an answer to these questions, but the following observations may contribute to further discussion or research.

An essential condition of successful PBL is that all the students should work hard for the benefit of the entire group. In the traditional method, it does not matter to Student X if Student Y has not prepared, because all students are required to cover the same material and the lecturer will in any case ‘set the record straight’ where necessary. If the PBL process involves students dividing up the research loads and presenting segments to each other in the contact sessions, then it is very important for every single student to pull his/her weight. A poorly-prepared contribution could jeopardise the learning of the entire class and under PBL conditions, the facilitator is not meant to ‘set the record straight’ but rather to point the students in the appropriate direction. This could lead to further delays in the acquisition of what might be quite basic information. On the other hand, the facilitator may go against the PBL grain and provide the correct information. The students will be lucky if the facilitator has the appropriate background knowledge to do so, but sometimes the facilitator may be too narrowly specialised to do so.

Work choices of WSU medical students

The major question to be asked of WSU Medical School and its entire programme – PBL and otherwise – is whether its students wish to remain in the area or in other rural areas after graduation.

In the focus group, only three out of 19 senior students said they wanted to work in rural areas after graduating. Two said they wanted to give back something to their communities. The third spoke of opportunities in private practice. The others said they would work off their bursaries but did not wish to remain in the Eastern Cape. These comments confirm the trends that have emerged through research at WSU.

Dambisya (2003) surveyed the 424 students at WSU Medical School in 2002. Nine were away at the time, so the study population was 415 students. A total of 364 students completed the questionnaire (response rate 87.7 per cent).

Out of the 347 students who stated their preferred sector of work, 286 (82.4 per cent) chose public hospitals, 39 (11.2 per cent) the private sector and 22 (6.4 per cent) the universities.

Out of 376 students who indicated place of work preferences, 44 (11.7 per cent) wanted to work in the city, 144 (38.3 per cent) wanted to work in urban areas other than a big city, 102 (27.2 per cent) wanted to work in rural areas, 28 (7.4 per cent) wanted to work abroad and 58 (15.4 per cent) had no preference. Fewer female than male respondents opted for rural areas (22.2 per cent of female choices versus 32.9 per cent of male choices).

A number of findings pointed to a declining interest in rural and community work as the students progressed through their training. Rural preference varied from 48.5 per cent among first-year students to 5.9 per cent for sixth-year students, while urban preference was 26.2 per cent in Year 1 and 64.7 per cent for Year VI. In Year 1, 54.4 per cent of students gave ‘the need to serve’ as their reason for work place choice. Among Year VI students, this had decreased to 15.6 per cent.
Most respondents (327 or 89.8 per cent) said they intended to specialise. Community medicine was most popular among first-year students (22 per cent) and least popular among sixth-year year students (3.2 per cent).

Dambisya concludes that because WSU medical students are predominantly black, the data supports the view that black graduates of South African medical schools are more likely to stay in South Africa than their white counterparts. That rural preference is strongest among first-year students and least among sixth-year students may be interpreted variously, he said. Applicants to WSU know of the rural bias of the curriculum, and many state a preference for rural service in the pre-admission interviews. First-year students, having gone through that exercise only two months prior to the questionnaire, might have been tempted to give ‘the right answer’. Over the years students were exposed to various communities, teaching hospitals, district hospitals, primary health-care centres and family practice. Senior students were therefore better able to make informed choices with the benefit of that exposure, including exposure to problems in rural under-served areas. Alternatively, the trend might reflect what has been reported about the altruism of students entering medical school, which apparently wanes as they progress through the course.

The study was not able to make further interpretations of workplace preferences because the questionnaires were completed anonymously and students were not identified in terms of their rural or urban origins.

Igumbor and Kwizera (2005) have described aspects of an ongoing study designed to ascertain the preferences of graduating students concerning the settings in which they would work, their career intentions and their overall views on the future. The study also explores the current work setting of all graduates since the inception of the medical school.

In order to explore the long-term placement of all graduates from the school since its inception in 1985, a list of graduates was checked against a larger list of medical practitioners registered with the HPCSA. Preliminary findings indicate that 36 per cent of graduates from WSU Medical School were practising in smaller towns and rural settings, while 53 per cent were working in urban areas, 4 per cent were overseas and 7 per cent had died. A lower percentage of graduates from the earlier traditional curriculum tended to practise in the rural areas than PBL/CBE graduates. Of the graduates from the traditional curriculum, 41 per cent were in rural areas, 43 per cent in urban areas, 12 per cent had died and 5 per cent were overseas. Of the graduates from the PBL/CBE curriculum, 66 per cent were in rural areas, 30 per cent were in urban areas, 2 per cent had died and 2 per cent were overseas.

Igumbor and Kwizera note that the majority who went overseas were based in Canada and New Zealand with others in Australia, India and the USA. The authors do not comment on the high proportion of deaths (7 per cent), which is distressing considering that the earliest school-leaving students to enter the programme in 1985 would be only about 38 years old today. The possibility of a link between these deaths and HIV/AIDS should be investigated.

**Telemedicine at WSU**

One of the most interesting developments at WSU Medical School, with enormous potential for the alleviation of the isolation of rural medical practice, is its telemedicine
programme. Although telepathology links with several international institutions had been established as early as 1995, the Telemedicine Unit itself was established in 1999. The aim was to co-ordinate research and to implement telemedicine projects around the former Transkei. The project was supported by the Howard University Telemedicine Center in Washington DC which enabled WSU to upgrade its videoconference facilities and create a Medical Intranet that provides online Emergency Medicine training for postgraduate students. Recently a project with the University of Basel in Switzerland led to the establishment of an iPath telemedicine server available freely for all medical doctors in the Eastern Cape and other areas of Southern Africa. The usefulness of this programme for rural and small town doctors and nurses was brought home to me when Professor Lech Banach, leader of the programme, allowed me to access two of the listservs. The one was entitled The Dermatology Group, the other was the Eastern Cape HIV Forum. Here are two examples of its use:

- A general practitioner in Port St Johns posts on the listserv four photographs of lesions on the body of an unidentified female patient. In the message attached, he describes her condition and circumstances and asks whether a diagnosis of lichen planus would be correct. He receives three replies, including one from a university in India. They confirm his diagnosis and suggest possible remedies. The Indian doctor suggests a biopsy and requests the doctor to send pictures of the biopsy, if possible.

- A doctor in a small town in the Eastern Cape describes a case of hyperlactataemia in an unidentified HIV-positive patient who is on ARV medication. The doctor describes the patient's condition and the tests which have been carried out. She says that she has stopped the ARV treatment because of the patient's raised lactate level, following the national guidelines for ARV treatment. A doctor from Colombia suggests the patient might have lactic acidosis (a side effect of ARV treatment) and makes some suggestions about treatment and further tests.

The interactions on this site reveal some of the difficulties of working in a rural province such as the Eastern Cape, where test samples have to be sent away to Port Elizabeth or Johannesburg. The doctor mentioned above said in relation to her enquiry:

> I am concerned about the lactate level as although taken without tourniquet [which could raise lactate levels] and on ice, it then travels to Port Elizabeth and gets processed about 24 hours after being taken. We are unable to do blood gases here or bicarb levels either – I am now concerned whether these results are a true reflection or not.

**Conclusion**

In many ways the WSU Medical School epitomises the complex interrelationships that underpin the model of professions and professional education presented at the start of this study. Born out of the socio-economic and political conditions of its time, in the heart of one of the poorest and most rural provinces, it has been deeply affected by the South African professional labour market, which favours urban rather than rural locations. The school is therefore very dependent on international labour market conditions to attract and keep foreign staff. It is difficult to imagine how it would have survived without the doctors who have come from Cuba at the request of the South African government or those who have left the turbulent political and economic conditions of countries in Africa and elsewhere. Even its curriculum has a political as well as educational purpose: the
school has needed to show it is doing something markedly different to the other medical schools to justify its establishment and continued existence. Today, its curriculum is one of the main sources of its national and international recognition.

The university in which it has been housed has travelled a very rocky road since its inception in 1977, marked by student protests against apartheid, police retaliation, management crises, talks of closure and finally the merger. The medical school is probably one of the main reasons why the university continues to exist and its own future within the new institution looks relatively secure. However even the merger road is not an easy route, as illustrated by the academic strike which took place shortly before my visit, and the worrying issue about where to find staff persists. Cuban numbers have dwindled and many of those who remain are close to retirement age. The government makes it difficult for foreign doctors who are not on government-to-government agreements to practise and settle in the country. Local doctors have so many more attractive options elsewhere in the country – even in the public service – that few are prepared to work in Mthatha. Conditions in the town have deteriorated rapidly since the abolition of the Transkei as an independent state and its subsequent loss of status within the Eastern Cape Province. Industries have moved elsewhere and there is high unemployment.

In these conditions, the medical school is pinning its hopes, more than ever before, on the production of new young doctors who are willing and able to stay and work in the area after graduating. Whether it is managing to do this is a moot point. Research by Igumbor and Kwizera (2005) showed that only 36 per cent of graduates were working in rural areas, while 53 per cent were in urban areas and 4 per cent overseas. Furthermore, a sizeable proportion of graduates (7 per cent) had died since leaving medical school. Given that the medical school is only 20 years old, even the earliest graduates must have died prematurely. This is a startling fact that requires further investigation.

Lecturers however believe that even if only one or two graduating students out of every ten are willing to work in a rural area, and even if that area is a small town rather than a remote village, and even if their work is in private rather than public practice, then WSU will still have made an important contribution to South Africa. The secret, they say, is to make it possible for students who themselves have grown up in rural areas to study medicine, for only such students are likely to feel comfortable in a poor rural environment. This means that the general standard of education must be improved to the level where even poor rural schools produce matriculants with appropriate maths and science passes. Lastly, there is a need to promote intangible values in the educational process which will motivate young people to work for the benefit of others. Some, like Professor Aguirre, put it in socialist terms:

> It is a new way of thinking...because the tendency of people as human beings is to look for the comfortability [sic], the possibility of having all the resources available – so it’s not easy to transform the way of thinking of people and telling people, ‘Hey, go to that place.’

Professor Aguirre said a different attitude was needed and a different approach to life as a whole. Children needed to be educated, from birth, to be committed to giving to

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33 I was told that the medical school generally distanced itself from the strike although the grievances did affect some of its staff in the basic sciences. At one stage the university was closed and staff and students were unable to enter the campus. During this time, the medical school continued its activities to some extent in the hospitals.
others. Parents had to model this behaviour, which was transmitted from generation to generation until it became ‘normal’ to behave in this way.

Others suggested that there was something to be said for the often-discredited ‘missionary’ spirit. Several interviewees spoke of the excellent care at former mission hospitals and the high quality of teaching at mission schools. One professor spoke admiringly of a paediatrician who was relocating from Port Elizabeth to Mthatha because he ‘saw the need’. The professor described this doctor as ‘some kind of missionary’.

Dr Yogeswaran (the Sri-Lankan family physician quoted at the start of this chapter), spoke of the satisfaction associated with ‘making a difference’. Others echoed her views:

I think there are advantages to being here. We are part of something that is growing and new. We are helping in this part of the country that really needs help. Everything is waiting to be done and there are lots of opportunities.
(Professor Alonso Betancourt)

I feel I make a difference…When I work in town, I don’t think I make a difference. (Ugandan family physician, who works at Mthatha General Hospital and a rural health centre)